



Attorney's Docket No. 018775-718

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Patent  
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2675

03-18-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Kenji ISHIBASHI et al.

Application No.: 08/988,537 ✓

Filed: December 10, 1997 ✓

For: IMAGE OBSERVATION  
APPARATUS

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) Group Art Unit: 2675  
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) Examiner: A. Awad  
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REPLY BRIEF

Technology Center 2600

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In reply to the Examiner's Answer dated January 29, 2002, Appellants make the following brief points.

In the Examiner's Answer and throughout the extended prosecution of the present application, the Examiner has equated the Tosaki patent's disclosure of a pause switch which is depressed "to temporarily stop the game" (column 16, lines 30-32), to an operation member which does not allow changing an image which is displayed on the display device. See, e.g., sentence bridging pages 5 and 6 of the Examiner's Answer. The Examiner also states that "in the Tosaki patent, if the pause switch stops the game..., the images must stop." See page 10 of the Examiner's Answer. Appellants contest this characterization of the Tosaki patent and the conclusions drawn from it. Applicants also note the Examiner's statement that "if the game is paused, there would be no need to have the image change in response to the detector." Page 10 of the Examiner's Answer. It is

hoped that the explanation which follows will illustrate why these characterizations of the Tosaki system are inaccurate.

First, it is noted that the Tosaki patent uses the phrase "temporarily stop the game" rather than "freezes the game" or "prevents the images from changing" or the like. Appellants believe that Tosaki accurately depicted his system in stating that the "game" stops.

To understand the difference between "stopping a game" and not allowing "changing the image" as used in present claim 1, for instance, it is noted that the imagery on heads up display is generated using two distinct processes. One process causes the images to change according to the game. For instance, in a flight simulator, the program might generate images of an approaching enemy plane, for instance. These images are related to the playing of the game. The second, distinct process is that the image being displayed changes with the orientation of the user. Hence, the user may rotate his head to look towards the rear of the plane to see if any plane is approaching the tail section of the plane for instance. The displayed images are changed simply due to the changes in the orientation of the user. The displayed image of the front of the cockpit would change to the rear of the cockpit (along with the outside scenery) as his head rotates. This change in scenery does not change, however, due to the game or his interaction with the game.

Hence, when the Tosaki patent mentions temporarily stopping the game, Appellants believe that Tosaki was stating exactly what he meant, that the game is paused, rather than the imagery. This is a common feature of heads-up displays insofar as the player may wish to pause the game to orient himself within the game (e.g., look around the cockpit) without

engaging in the interactive game process. Second, the orientation aspect of the display basically is designed to simulate a real world environment. If the orientation display were stopped while the heads-up display was still displaying images, then when a user rotated his or her head, he or she would get the sensation that the entire observable world around him or her was spinning with the rotation of his or her head, for instance. This would be unacceptably disorienting to the user. Hence, not only is Appellants' interpretation in harmony with the words used in the Tosaki patent, it makes sense from practical standpoint.

The Examiner dismisses this disorienting affect his interpretation of the Tosaki patent would entail by suggesting that the user could simply take off the head-mounted display. However, the disorientation would already have occurred and, in any event, it would not be appropriate or obvious to design into a system such an apparent flaw.

In marked contrast, the present invention has as its origin a display device that is held by the user's hands up to the user's eyes. Hence, in this instance because the user will be taking the display device away from his eyes when discontinuing use, it would make sense to stop the images from changing when the user is done using the observation apparatus since he would be simultaneously removing the device away from his eyes. In this way, when the user resumes his or her use of the device, by again depressing the operational member he or she can resume his or her observation at the same orientation as was previously present before the use of the device was interrupted.

It is hoped that with this explanation it will be understood that the Tosaki patent, when it discloses that the pause switch is used to temporarily "stop the game," it means what it says, stop the game, rather than freezing the images.

Third, it is also noted that the Tosaki patent only addresses the use of the pause switch when the visor is moved up and the fluorescent lamp is turned off. The Examiner's citation to column 18, lines 33-35 is noted with appreciation, but what this passage states is that the pause mode is automatically activated when the visor has been opened, thus relieving the operator of the necessity of touching the pause switch on the control pad 201, and not an indication that the pause switch is operable when the visor is down and images are being displayed. It is the undersigned's understanding of the Tosaki patent that the pause switch is to simply stop the game from continuing when the user is not actively engaged. However, the Appellants' have addressed hypothetical situation the Examiner has speculated on, i.e., the possibility that the pause switch could be used when the visor is down and images are displayed, as explained above and in Appellants' Brief beginning at page 7 thereof.

Fourth, at page 10 of the Examiner's Answer, the Examiner suggests that the claims contain a "negative limitation" with the apparent implication that the identified recitations are being somewhat disregarded. Applicants note two things. First, the recitation is not a negative limitation. Claim 1, for instance, positively recites that the controller actively prevents the changing of the image which is displayed on the display device. Second, negative recitations are not any less significant than positive recitations in interpreting

claims, as articulated in MPEP 2173.05(i), even assuming one could properly view this recitation as a negative limitation.

Fifth, Appellants wish to make a brief point regarding the Examiner's characterization of the Kodama patent. The Kodama patent involves a camera 32 mounted on a visor 29 so that a supervisor can supervise and correct the operations of an operator wearing the visor. In contrast, claim 24 recites that a camera forms the image which is displayed on the image display device and the controller controls the image which is displayed thereon by *controlling a posture of the camera*. In the Kodama patent, the camera is simply mounted to a visor of the operator's head. There is no controller which controls the image as displayed on the image display device by controlling the posture of the camera. Only the operator controls his own posture. Similar comments apply to claim 26 which recites "an image forming device" rather than a camera and that the controller controls the image by operating image data which are output from the image forming device. Whether Kodama is viewed alone or in combination with the other applied art, these features of claims 24 and 26 are simply missing from the combination of the Kodama, Tosaki and Tabata patents. See, however, the Takasu patent publication.

Sixth and finally, it is noted that the Examiner's answer does not address claim 23's recitation that the main body is configured to be held in a user's hands wherein the user observes an image being displayed on the image display device. The applied art, namely the Tabata and Tosaki patents, are both head mounted displays.

***Conclusion***

Appellants respectfully submit that they have specified errors in the Examiner's final rejection and his Answer, and specify how the recitations of the claims not found in the applied art render the present invention unobviousness. In light of the foregoing, Appellants respectfully request that the Examiner's final rejection of claims 1-4 and 23-26 be overruled and the application remanded to the Examiner for prompt allowance.

Respectfully submitted,

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